SEQUENCE LISTING

(1) GENERAL INFORMATION:

    (i) APPLICANT: Dong, Fang
                Lyamichev, Victor I.
                Prudent, James R.

   (ii) TITLE OF INVENTION: TARGET-DEPENDENT REACTIONS USING
       STRUCTURE-BRIDGING OLIGONUCLEOTIDES

  (iii) NUMBER OF SEQUENCES: 123

   (iv) CORRESPONDENCE ADDRESS:
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       (B) STREET: 220 Montgomery Street, Suite 2200
       (C) CITY: San Francisco
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       (E) COUNTRY: USA
       (F) ZIP: 94104

    (v) COMPUTER READABLE FORM:
       (A) MEDIUM TYPE: Floppy disk
       (B) COMPUTER: IBM PC compatible
       (C) OPERATING SYSTEM: PC-DOS/MS-DOS
       (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

   (vi) CURRENT APPLICATION DATA:
       (A) APPLICATION NUMBER: US
       (B) FILING DATE:
       (C) CLASSIFICATION:

  (viii) ATTORNEY/AGENT INFORMATION:
       (A) NAME: MacKnight, Kamrin T.
       (B) REGISTRATION NUMBER: 38,230
       (C) REFERENCE/DOCKET NUMBER: FORS-03345

   (ix) TELECOMMUNICATION INFORMATION:
       (A) TELEPHONE: (415) 705-8410
       (B) TELEFAX: (415) 397-8338

(2) INFORMATION FOR SEQ ID NO:1:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 391 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

   (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

```
AGCTCGTATG GCACCGGAAC CGGTAAGGAC GCGATCACCA GCGGCATCGA GGTCGTATGG      60

ACGAACACCC CGACGAAATG GGACAACAGT TTCCTCGAGA TCCTGTACGG CTACGAGTGG     120

GAGCTGACGA AGAGCCCTGC TGGCGCTTGG CAATACACCG CCAAGGACGG CGCCGGTGCC     180

GGCACCATCC CGGACCCGTT CGGCGGGCCA GGGCGCTCCC CGACGATGCT GGCCACTGAC     240

CTCTCGCTGC GGGTGGATCC GATCTATGAG CGGATCACGC GTCGCTGGCT GGAACACCCC     300
```

```
GAGGAATTGG CCGACGAGTT CGCCAAGGCC TGGTACAAGC TGATCCACCG AGACATGGGT    360

CCCGTTGCGA GATACCTTGG GCCGGTGGTC C                                   391
```

5   (2) INFORMATION FOR SEQ ID NO:2:

         (i) SEQUENCE CHARACTERISTICS:
           (A) LENGTH: 391 base pairs
           (B) TYPE: nucleic acid
10   (C) STRANDEDNESS: single
           (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
           (A) DESCRIPTION: /desc = "DNA"
15

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

```
AGCTCGTATG GCACCGGAAC CGGTAAGGAC GCGATCACCA CCGGCATCGA GGTCGTATGG    60

ACGAACACCC CGACGAAATG GGACAACAGT TTCCTCGAGA TCCTGTACGG CTACGAGTGG    120

GAGCTGACGA AGAGCCCTGC TGGCGCTTGG CAATACACCG CCAAGGACGG CGCCGGTGCC    180

GGCACCATCC CGGACCCGTT CGGCGGGCCA GGGCGCTCCC CGACGATGCT GGCCACTGAC    240

CTCTCGCTGC GGGTGGATCC GATCTATGAG CGGATCACGC GTCGCTGGCT GGAACACCCC    300

GAGGAATTGG CCGACGAGTT CGCCAAGGCC TGGTACAAGC TGATCCACCG AGACATGGGT    360

CCCGTTGCGA GATACCTTGG GCCGCTGGTC C                                   391
```

    (2) INFORMATION FOR SEQ ID NO:3:

         (i) SEQUENCE CHARACTERISTICS:
           (A) LENGTH: 391 base pairs
35   (B) TYPE: nucleic acid
           (C) STRANDEDNESS: single
           (D) TOPOLOGY: linear

40   (ii) MOLECULE TYPE: other nucleic acid
           (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

```
AGCTCGTATG GCACCGGAAC CGGTAAGGAC GCGATCACCA GCGGCATCGA GGTCGTATGG    60

ACGAACACCC CGACGAAATG GGACAACAGT TTCCTCGAGA TCCTGTACGG CTACGAGTGG    120

GAGCTGACGA AGAGCCCTGC TGGCGCTTGG CAATACACCG CCAAGGACGG CGCCGGTGCC    180

GGCACCATCC CGGACCCGTT CGGCGGGCCA GGGCGCTCCC CGACGATGCT GGCCACTGAC    240

CTCTCGCTGC GGGTGGATCC GATCTATGAG CGGATCACGC GTCGCTGGCT GGAACACCCC    300

GAGGAATTGG CCGACGAGTT CGCCAAGGCC TGGTACAAGC TGATCCACCG AGACATGGGT    360

CCCGTTGCGA GATACCTTGG GCCGCTGGTC C                                   391
```

    (2) INFORMATION FOR SEQ ID NO:4:
60

         (i) SEQUENCE CHARACTERISTICS:
           (A) LENGTH: 391 base pairs
           (B) TYPE: nucleic acid
           (C) STRANDEDNESS: single
65   (D) TOPOLOGY: linear

```
        (ii) MOLECULE TYPE: other nucleic acid
             (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:
```

AGCTCGTATG GCACCGGAAC CGGTAAGGAC GCGATCACCA CCGGCATCGA GGTCGTATGG   60

ACGAACACCC CGACGAAATG GGACAACAGT TTCCTCGAGA TCCTGTACGG CTACGAGTGG   120

GAGCTGACGA AGAGCCCTGC TGGCGCTTGG CAATACACCG CCAAGGACGG CGCCGGTGCC   180

GGCACCATCC CGGACCCGTT CGGCGGGCCA GGGCGCTCCC CGACGATGCT GGCCACTGAC   240

CTCTCGCTGC GGGTGGATCC GATCTATGAG CGGATCACGC GTCGCTGGCT GGAACACCCC   300

GAGGAATTGG CCGACGAGTT CGCCAAGGCC TGGTACAAGC TGATCCACCG AGACATGGGT   360

CCCGTTGCGA GATACCTTGG GCCGGTGGTC C   391

(2) INFORMATION FOR SEQ ID NO:5:

```
        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 20 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
             (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:
```

AGCTCGTATG GCACCGGAAC   20

(2) INFORMATION FOR SEQ ID NO:6:

```
        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 20 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
             (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:
```

TTGACCTCCC ACCCGACTTG   20

(2) INFORMATION FOR SEQ ID NO:7:

```
        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 21 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
             (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:
```

AGCTCGTATG GCACCGGAAC C   21

(2) INFORMATION FOR SEQ ID NO:8:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 20 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

GGACCAGCGG CCCAAGGTAT   20

(2) INFORMATION FOR SEQ ID NO:9:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 22 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

GGACCACCGG CCCAAGGTAT CT   22

(2) INFORMATION FOR SEQ ID NO:10:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 21 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

TTTTTGCCGC TGGTGATCGC G   21

(2) INFORMATION FOR SEQ ID NO:11:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 12 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: single
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

GGAGAGCCAT AG   12

(2) INFORMATION FOR SEQ ID NO:12:

   (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 11 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

  (ii) MOLECULE TYPE: other nucleic acid
      (A) DESCRIPTION: /desc = "DNA"

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

TGGTCTGCGG A   11

(2) INFORMATION FOR SEQ ID NO:13:

   (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 11 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

  (ii) MOLECULE TYPE: other nucleic acid
      (A) DESCRIPTION: /desc = "DNA"

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

GGACGACCGG G   11

(2) INFORMATION FOR SEQ ID NO:14:

   (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 11 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

  (ii) MOLECULE TYPE: other nucleic acid
      (A) DESCRIPTION: /desc = "DNA"

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

GGAGATTTGG G   11

(2) INFORMATION FOR SEQ ID NO:15:

   (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 11 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: single
      (D) TOPOLOGY: linear

  (ii) MOLECULE TYPE: other nucleic acid
      (A) DESCRIPTION: /desc = "DNA"

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

CCGCGAGACT G   11

(2)   INFORMATION FOR SEQ ID NO:16:

     (i)   SEQUENCE CHARACTERISTICS:
         (A)   LENGTH: 12 base pairs
         (B)   TYPE: nucleic acid
         (C)   STRANDEDNESS: single
         (D)   TOPOLOGY: linear

     (ii) MOLECULE TYPE: other nucleic acid
         (A)   DESCRIPTION: /desc = "DNA"

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

CTAGCCGAGT AG   12

(2)   INFORMATION FOR SEQ ID NO:17:

     (i)   SEQUENCE CHARACTERISTICS:
         (A)   LENGTH: 11 base pairs
         (B)   TYPE: nucleic acid
         (C)   STRANDEDNESS: single
         (D)   TOPOLOGY: linear

     (ii) MOLECULE TYPE: other nucleic acid
         (A)   DESCRIPTION: /desc = "DNA"

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

TGTTGGGTCG C   11

(2)   INFORMATION FOR SEQ ID NO:18:

     (i)   SEQUENCE CHARACTERISTICS:
         (A)   LENGTH: 11 base pairs
         (B)   TYPE: nucleic acid
         (C)   STRANDEDNESS: single
         (D)   TOPOLOGY: linear

     (ii) MOLECULE TYPE: other nucleic acid
         (A)   DESCRIPTION: /desc = "DNA"

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

CCGCGAGACC G   11

(2)   INFORMATION FOR SEQ ID NO:19:

     (i)   SEQUENCE CHARACTERISTICS:
         (A)   LENGTH: 11 base pairs
         (B)   TYPE: nucleic acid
         (C)   STRANDEDNESS: single
         (D)   TOPOLOGY: linear

     (ii) MOLECULE TYPE: other nucleic acid
         (A)   DESCRIPTION: /desc = "DNA"

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

CCGCAAGACC G   11

(2) INFORMATION FOR SEQ ID NO:20:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 289 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

       (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

GATTCTGTCT TCACGCAGAA AGCGTCTAGC CATGGCGTTA GTATGAGTGT CGTGCAGCCT   60

CCAGGACCCC CCCTCCCGGG AGAGCCATAG TGGTCTGCGG AACCGGTGAG TACACCGGAA   120

TTGCCAGGAC GACCGGGTCC TTTCTTGGAT CAACCCGCTC AATGCCTGGA GATTTGGGCG   180

TGCCCCCGCA AGACTGCTAG CCGAGTAGTG TTGGGTCGCG AAAGGCCTTG TGGTACTGCC   240

TGATAGGGTG CTTGCGAGTG CCCCGGGAGG TCTCGTAGAC CGTGCAATC   289

(2) INFORMATION FOR SEQ ID NO:21:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 286 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

       (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

GATTCTGTCT TCACGCAGAA AGCGTCTAGC CATGGCGTTA GTATGAGTGT CGTGCAGCCT   60

CCAGGTCCCC CCCTCCCGGG AGAGCCATAG TGGTCTGCGG AACCGGTGAG TACACCGGAA   120

TTGCCAGGAC GACCGGGTCC TTTCTTGGAT CAACCCGCTC AATGCCTGGA GATTTGGGCG   180

TGCCCCCGCG AGACTGCTAG CCGAGTAGTG TTGGGTCGCG AAAGGCCTTG TGGTACTGCC   240

TGATAGGGTG CTTGCGAGTG CCCCGGGAGG TCTCGTAGAC CGTGCA   286

(2) INFORMATION FOR SEQ ID NO:22:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 289 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

       (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

GATTCTGTCT TCACGCAGAA AGCGTCTAGC CATGGCGTTA GTATGAGTGT CGTACAGCCT   60

CCAGGCCCCC CCCTCCCGGG AGAGCCATAG TGGTCTGCGG AACCGGTGAG TACACCGGAA   120

TTGCCGGGAA GACTGGGTCC TTTCTTGGAT AAACCCACTC TATGCCCGGC CATTTGGGCG   180

TGCCCCCGCA AGACTGCTAG CCGAGTAGCG TTGGGTTGCG AAAGGCCTTG TGGTACTGCC   240

TGATAGGGTG CTTGCGAGTA CCCCGGGAGG TCTCGTAGAC CGTGCAATC   289

5   (2) INFORMATION FOR SEQ ID NO:23:

          (i) SEQUENCE CHARACTERISTICS:
               (A) LENGTH: 289 base pairs
               (B) TYPE: nucleic acid
10   (C) STRANDEDNESS: double
               (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
               (A) DESCRIPTION: /desc = "DNA"
15
          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

GATTCTGTCT TCACGCAGAA AGCGCCTAGC CATGGCGTTA GTACGAGTGT CGTGCAGCCT   60

20   CCAGGACCCC CCCTCCCGGG AGAACCATAG TGGTCTGCGG AACCGGTGAG TACACCGGAA   120

TCGCTGGGGT GACCGGGTCC TTTCTTGGAG CAACCCGCTC AATACCCAGA AATTTGGGCG   180

TGCCCCCGCG AGATCACTAG CCGAGTAGTG TTGGGTCGCG AAAGGCCTTG TGGTACTGCC   240
25
TGATAGGGTG CTTGCGAGTG CCCCGGGAGG TCTCGTAGAC CGTGCAATC   289

     (2) INFORMATION FOR SEQ ID NO:24:

          (i) SEQUENCE CHARACTERISTICS:
30   (A) LENGTH: 18 base pairs
               (B) TYPE: nucleic acid
               (C) STRANDEDNESS: single
               (D) TOPOLOGY: linear

35   (ii) MOLECULE TYPE: other nucleic acid
               (A) DESCRIPTION: /desc = "DNA"

40   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

CTCGCAAGCA CCCTATCA   18

     (2) INFORMATION FOR SEQ ID NO:25:

45   (i) SEQUENCE CHARACTERISTICS:
               (A) LENGTH: 21 base pairs
               (B) TYPE: nucleic acid
               (C) STRANDEDNESS: single
               (D) TOPOLOGY: linear
50
          (ii) MOLECULE TYPE: other nucleic acid
               (A) DESCRIPTION: /desc = "DNA"

          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:
55
GCAGAAAGCG TCTAGCCATG G   21

     (2) INFORMATION FOR SEQ ID NO:26:

60   (i) SEQUENCE CHARACTERISTICS:
               (A) LENGTH: 244 base pairs
               (B) TYPE: nucleic acid
               (C) STRANDEDNESS: double
               (D) TOPOLOGY: linear
65

```
        (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

GCAGAAAGCG TCTAGCCATG GCGTTAGTAT GAGTGTCGTG CAGCCTCCAG GACCCCCCCT      60

CCCGGGAGAG CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATTGC CAGGACGACC     120

GGGTCCTTTC TTGGATCAAC CCGCTCAATG CCTGGAGATT TGGGCGTGCC CCCGCAAGAC     180

TGCTAGCCGA GTAGTGTTGG GTCGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG     240

CGAG                                                                  244

    (2) INFORMATION FOR SEQ ID NO:27:

            (i)  SEQUENCE CHARACTERISTICS:
                (A)  LENGTH: 244 base pairs
                (B)  TYPE: nucleic acid
                (C)  STRANDEDNESS: double
                (D)  TOPOLOGY: linear

            (ii) MOLECULE TYPE: other nucleic acid
                (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

GCAGAAAGCG TCTAGCCATG GCGTTAGTAT GAGTGTCGTG CAGCCTCCAG GTCCCCCCCT      60

CCCGGGAGAG CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATTGC CAGGACGACC     120

GGGTCCTTTC TTGGATCAAC CCGCTCAATG CCTGGAGATT TGGGCGTGCC CCCGCGAGAC     180

TGCTAGCCGA GTAGTGTTGG GTCGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG     240

CGAG                                                                  244

    (2) INFORMATION FOR SEQ ID NO:28:

            (i)  SEQUENCE CHARACTERISTICS:
                (A)  LENGTH: 244 base pairs
                (B)  TYPE: nucleic acid
                (C)  STRANDEDNESS: double
                (D)  TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

GCAGAAAGCG TCTAGCCATG GCGTTAGTAT GAGTGTCGTA CAGCCTCCAG GCCCCCCCCT      60

CCCGGGAGAG CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATTGC CGGGAAGACT     120

GGGTCCTTTC TTGGATAAAC CCACTCTATG CCCGGCCATT TGGGCGTGCC CCCGCAAGAC     180

TGCTAGCCGA GTAGCGTTGG GTTGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG     240

CGAG                                                                  244
```

(2) INFORMATION FOR SEQ ID NO:29:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 244 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

```
GCAGAAAGCG CCTAGCCATG GCGTTAGTAC GAGTGTCGTG CAGCCTCCAG GACCCCCCCT      60

CCCGGGAGAA CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATCGC TGGGGTGACC     120

GGGTCCTTTC TTGGAGCAAC CCGCTCAATA CCCAGAAATT TGGGCGTGCC CCCGCGAGAT     180

CACTAGCCGA GTAGTGTTGG GTCGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG     240

CGAG                                                                  244
```

(2) INFORMATION FOR SEQ ID NO:30:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 216 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

```
CAGAAAGGGT TTAGCCATGG GGTTAGTATG AGTGTCGTAC AGCCTCCAGG CCCCCCCCTC      60

CCGGGAGAGC CATAGTGGTC TGCGGAACCG GTGAGTACAC CGGAATTGCC GGGAAGACTG     120

GGTCCTTTCT TGGATAAACC CACTCTATGC CCGGCCATTT GGGCGTGCCC CCGCAAGACT     180

GCTAGCCGAG TAGCGTTGGG TTGCGAAAGG CCTTGT                               216
```

(2) INFORMATION FOR SEQ ID NO:31:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 244 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

```
CAGAAAGGGT TTAGCCATGG CGTTAGTATG AGTGTCGTGC AGCCTCCAGG ACCCCCCCTC      60

CCGGGAGAGC CATAGTGGTC TGCGGAACCG GTGAGTACAC CGGAATTGCC AGGACGACCG     120

GGTCCTTTCT TGGATAAAAC CCGCTCAATG CCTGGAGATT TGGGCGTGCC CCCGCAAGAC     180
```

```
TGCTAGCCGA GTAGTGTTGG GTCGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG        240

CAAG                                                                     244
```

5 (2) INFORMATION FOR SEQ ID NO:32:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 239 base pairs
            (B) TYPE: nucleic acid
10   (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"
15
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

```
GCAGAAAGGT TTAGCCATGG GTTAGTATGA GTGTCGTGCA GCCTCCAGGA CCCCCCCTCC          60

CGGGAGAGCC ATAGTGGTCT GCGGAACCGG TGAGTACACC GGAATTGCCA GGACGACCGG         120

GTCCTTTCTT GGATTAACCC GCTCAATGCC TGGAGATTTG GGCGTGCCCC CGCAAGACTG         180

CTAGCCGAGT AGTGTTGGGT CGCGAAAGGC CTTGTGGTAC TGCCTGATAG GGTGCTTGC         239
```

25 (2) INFORMATION FOR SEQ ID NO:33:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 240 base pairs
30   (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: other nucleic acid
35   (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

```
GCAGAAAGGT TTAGCCATGG GGTTAGTATG AGTGTCGTAC AGCCTCCAGG ACCCCCCCTC          60

CCGGGAGAGC CATAGTGGTC TGCGGAACCG GTGAGTACAC CGGAATTGCC AGGACGACCG         120

GGTCCTTTCT TGGATAAACC CGCTCAATGC CTGGAGATTT GGGCGTGCCC CCGCAAGACT         180

GCTAGCCGAG TAGTGTTGGG TCGCGAAAGG CCTTGTGGTA CTGCCTGATA GGGTGCTTGC         240
```

45 (2) INFORMATION FOR SEQ ID NO:34:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 240 base pairs
50   (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

55   (ii) MOLECULE TYPE: other nucleic acid
            (A) DESCRIPTION: /desc = "DNA"

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

```
GCAGAAAGGG TTTAGCCATG GCGTTAGTAT GAGTGTCGTA CAGCCTCCAG GCCCCCCCCT          60

CCCGGGAGAG CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATTAC CGGAAAGACT         120
```

```
GGGTCCTTTC TTGGATAAAC CCACTCTATG TCCGGTCATT TGGGCGTGCC CCCGCAAGAC        180

TGCTAGCCGA GTAGCGTTGG GTTGCAAAGG CCTTGTGGTA CTGCCTGATA GGGTGCTTGC        240
```

(2) INFORMATION FOR SEQ ID NO:35:

       (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 240 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

       (ii) MOLECULE TYPE: other nucleic acid
          (A) DESCRIPTION: /desc = "DNA"

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

```
CAGAAAGGGT TTAGCCATGG GGTTAGTACG AGTGTCGTGC AGCCTCCAGG CCCCCCCCTC         60

CCGGGAGAGC CATAGTGGTC TGCGGAACCG GTGAGTACAC CGGAATCGCT GGGGTGACCG        120

GGTCCTTTCT TGGAGCAACC CGCTCAATAC CCAGAAATTT GGGCGTGCCC CCGCGAGATC        180

ACTAGCCGAG TAGTGTTGGG TCGCGAAAGG CCTTGTGGTA CTGCCTGATA GGGTGCTTGC        240
```

(2) INFORMATION FOR SEQ ID NO:36:

       (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 239 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

       (ii) MOLECULE TYPE: other nucleic acid
          (A) DESCRIPTION: /desc = "DNA"

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

```
AGAAAGCGTT TAGCCATGGC GTTAGTATGA GTGTTGTGCA GCCTCCAGGA CCCCCCCTCC         60

CGGGAGAGCC ATAGTGGTCT GCGGAACCGG TGAGTACACC GGAATTGCCA GGACGACCGG        120

GTCCTTTCTT GGATCAACCC GCTCAATGCC TGGAGATTTG GGCGTGCCCC CGCAAGACTG        180

CTAGCCGAGT AGTGTTGGGT CGCGAAAGGC CTTGTGGTAC TGCCTGATAG GGTGCTTGC        239
```

(2) INFORMATION FOR SEQ ID NO:37:

       (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 232 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

       (ii) MOLECULE TYPE: other nucleic acid
          (A) DESCRIPTION: /desc = "DNA"

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

```
GTTTAGCCAT GGCGTTAGTA TGAGTGTCGT GCAGCCTCCA GGACCCCCCC TCCCGGGAGA         60

GCCATAGTGG TCTGCGGAAC CGGTGAGTAC ACCGGAATTG CCAGGACGAC CGGGTCCTTT        120
```

CTTGGATCAA CCCGCTCAAT GCCTGGAGAT TTGGGCGTGC CCCCGCGAGA CCGCTAGCCG   180

AGTAGTGTTG GGTCGCGAAA GGCCTTGTGG TACTGCCTGA TAGGGTGCTT GC   232

5   (2) INFORMATION FOR SEQ ID NO:38:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 240 base pairs
              (B) TYPE: nucleic acid
10   (C) STRANDEDNESS: double
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
               (A) DESCRIPTION: /desc = "DNA"
15

          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

GCAGAAAGCG TTTAGCCATG GCGTTAGTAC GAGTGTCGTG CAGCCTCCAG GACCCCCCT   60

20   CCCGGGAGAG CCATAGTGGT CTGCGGAACC GGTGAGTACA CCGGAATCGC TGGGGTGACC   120

GGGTCCTTTC TTGGAACAAC CCGCTCAATA CCCAGAAATT TGGGCGTGCC CCCGCGAGAT   180

CACTAGCCGA GTAGTGTTGG GTCGCGAAAG GCCTTGTGGT ACTGCCTGAT AGGGTGCTTG   240

25   (2) INFORMATION FOR SEQ ID NO:39:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 44 base pairs
              (B) TYPE: nucleic acid
30   (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
35   (A) DESCRIPTION: /desc = "DNA"

          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

TGCTCTCTGG TCGCTGTCTG AAAGACAGCG TGGTCTCTCG TAAT   44

40   (2) INFORMATION FOR SEQ ID NO:40:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 44 base pairs
45   (B) TYPE: nucleic acid
              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
50   (A) DESCRIPTION: /desc = "DNA"

          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

TGCTCTCTGG TCGCTGTCTG AAAGACTCCG TGGTCTCTCG TAAT   44
55
     (2) INFORMATION FOR SEQ ID NO:41:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 44 base pairs
60   (B) TYPE: nucleic acid
              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
65   (A) DESCRIPTION: /desc = "DNA"

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

    TGCTCTCTGG TCGCTGTCTG AATTTTTTTT TGGTCTCTCG TAAT   44

5 (2) INFORMATION FOR SEQ ID NO:42:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 14 base pairs
              (B) TYPE: nucleic acid
10   (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
              (A) DESCRIPTION: /desc = "DNA"
15
       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

    AGACCATTAC CAGA   14

20 (2) INFORMATION FOR SEQ ID NO:43:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 16 base pairs
              (B) TYPE: nucleic acid
25   (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
              (A) DESCRIPTION: /desc = "DNA"
30
       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

    GAGACCATTA CCAGAG   16

35 (2) INFORMATION FOR SEQ ID NO:44:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 18 base pairs
              (B) TYPE: nucleic acid
40   (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
              (A) DESCRIPTION: /desc = "DNA"
45
       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

    AGAGACCATT ACCAGAGA   18

50 (2) INFORMATION FOR SEQ ID NO:45:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 18 base pairs
              (B) TYPE: nucleic acid
55   (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
              (A) DESCRIPTION: /desc = "DNA"
60
       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

    AGAGACCATT ACAAGCGA   18

(2) INFORMATION FOR SEQ ID NO:46:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

   (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

AGCGAACATT ACCAGAGA   18

(2) INFORMATION FOR SEQ ID NO:47:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

   (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

AGAGACCAAC CAGAGA   16

(2) INFORMATION FOR SEQ ID NO:48:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 9 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

   (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:

AGAGACCAT   9

(2) INFORMATION FOR SEQ ID NO:49:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 9 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

   (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

TACCAGAGA   9

(2) INFORMATION FOR SEQ ID NO:50:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

ACCAGAGAGC   10

(2) INFORMATION FOR SEQ ID NO:51:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

TCAGACAGCG   10

(2) INFORMATION FOR SEQ ID NO:52:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

AGTGGTCTGC GGAACCGG   18

(2) INFORMATION FOR SEQ ID NO:53:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

AGTGTCGTTT GGAACCGG   18

(2) INFORMATION FOR SEQ ID NO:54:

            (i) SEQUENCE CHARACTERISTICS:
                (A) LENGTH: 18 base pairs
5   (B) TYPE: nucleic acid
                (C) STRANDEDNESS: single
                (D) TOPOLOGY: linear

           (ii) MOLECULE TYPE: other nucleic acid
10   (A) DESCRIPTION: /desc = "DNA"

           (xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

    AGTGTCGTAA GGAACCGG   18
15
(2) INFORMATION FOR SEQ ID NO:55:

            (i) SEQUENCE CHARACTERISTICS:
                (A) LENGTH: 18 base pairs
20   (B) TYPE: nucleic acid
                (C) STRANDEDNESS: single
                (D) TOPOLOGY: linear

           (ii) MOLECULE TYPE: other nucleic acid
25   (A) DESCRIPTION: /desc = "DNA"

           (xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

    AGTGTCGTCA GGAACCGG   18
30
(2) INFORMATION FOR SEQ ID NO:56:

            (i) SEQUENCE CHARACTERISTICS:
                (A) LENGTH: 16 base pairs
35   (B) TYPE: nucleic acid
                (C) STRANDEDNESS: single
                (D) TOPOLOGY: linear

           (ii) MOLECULE TYPE: other nucleic acid
40   (A) DESCRIPTION: /desc = "DNA"

           (xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

    AGTGTCGTGG AACCGG   16
45
(2) INFORMATION FOR SEQ ID NO:57:

            (i) SEQUENCE CHARACTERISTICS:
                (A) LENGTH: 18 base pairs
50   (B) TYPE: nucleic acid
                (C) STRANDEDNESS: single
                (D) TOPOLOGY: linear

           (ii) MOLECULE TYPE: other nucleic acid
55   (A) DESCRIPTION: /desc = "DNA"

           (xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

    AGTGTCGTTT GGATCCGG   18
60

(2) INFORMATION FOR SEQ ID NO:58:

          (i) SEQUENCE CHARACTERISTICS:
               (A) LENGTH: 18 base pairs
  5   (B) TYPE: nucleic acid
               (C) STRANDEDNESS: single
               (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
 10   (A) DESCRIPTION: /desc = "DNA"

         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

AGTGACGTTT GGAACCGG   18
 15
(2) INFORMATION FOR SEQ ID NO:59:

          (i) SEQUENCE CHARACTERISTICS:
               (A) LENGTH: 8 base pairs
 20   (B) TYPE: nucleic acid
               (C) STRANDEDNESS: single
               (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
 25   (A) DESCRIPTION: /desc = "DNA"

         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

GGAACCGG   8
 30
(2) INFORMATION FOR SEQ ID NO:60:

          (i) SEQUENCE CHARACTERISTICS:
               (A) LENGTH: 20 base pairs
 35   (B) TYPE: nucleic acid
               (C) STRANDEDNESS: single
               (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
 40   (A) DESCRIPTION: /desc = "DNA"

         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

TTTTGTGAGT ACACCGGAAT   20
 45
(2) INFORMATION FOR SEQ ID NO:61:

          (i) SEQUENCE CHARACTERISTICS:
               (A) LENGTH: 14 base pairs
 50   (B) TYPE: nucleic acid
               (C) STRANDEDNESS: single
               (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
 55   (A) DESCRIPTION: /desc = "DNA"

         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:

TTTTGTGAGT ACAC   14
 60

(2)   INFORMATION FOR SEQ ID NO:62:

          (i)   SEQUENCE CHARACTERISTICS:
                (A)   LENGTH: 15 base pairs
5   (B)   TYPE: nucleic acid
                (C)   STRANDEDNESS: single
                (D)   TOPOLOGY: linear

         (ii)   MOLECULE TYPE: other nucleic acid
10   (A)   DESCRIPTION: /desc = "DNA"

         (xi)   SEQUENCE DESCRIPTION: SEQ ID NO:62:

TGAGTACACC GGAAT   15

15
(2)   INFORMATION FOR SEQ ID NO:63:

          (i)   SEQUENCE CHARACTERISTICS:
                (A)   LENGTH: 33 base pairs
20   (B)   TYPE: nucleic acid
                (C)   STRANDEDNESS: single
                (D)   TOPOLOGY: linear

         (ii)   MOLECULE TYPE: other nucleic acid
25   (A)   DESCRIPTION: /desc = "DNA"

         (xi)   SEQUENCE DESCRIPTION: SEQ ID NO:63:

ATTCCGGTGT ACTCACCGGT TCCAAACGAC ACT   33

30
(2)   INFORMATION FOR SEQ ID NO:64:

          (i)   SEQUENCE CHARACTERISTICS:
                (A)   LENGTH: 18 base pairs
35   (B)   TYPE: nucleic acid
                (C)   STRANDEDNESS: single
                (D)   TOPOLOGY: linear

         (ii)   MOLECULE TYPE: other nucleic acid
40   (A)   DESCRIPTION: /desc = "DNA"

         (xi)   SEQUENCE DESCRIPTION: SEQ ID NO:64:

CAGCCTCCCC TTCTTGGA   18

45
(2)   INFORMATION FOR SEQ ID NO:65:

          (i)   SEQUENCE CHARACTERISTICS:
                (A)   LENGTH: 20 base pairs
50   (B)   TYPE: nucleic acid
                (C)   STRANDEDNESS: single
                (D)   TOPOLOGY: linear

         (ii)   MOLECULE TYPE: other nucleic acid
55   (A)   DESCRIPTION: /desc = "DNA"

         (xi)   SEQUENCE DESCRIPTION: SEQ ID NO:65:

AGTGTCGTTT GGAATTAATT   20

60

(2)   INFORMATION FOR SEQ ID NO:66:

    (i)   SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

GCGAAAGGCC TTGTGG   16

(2)   INFORMATION FOR SEQ ID NO:67:

    (i)   SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

ACAGCCTCCA GGACCC   16

(2)   INFORMATION FOR SEQ ID NO:68:

    (i)   SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

GCAGCCTCCA GGACCC   16

(2)   INFORMATION FOR SEQ ID NO:69:

    (i)   SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 193 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

CGTGGAGGCG ATCACACCGC AGACGTTGAT CAACATCCGG CCGGTGGTCG CCGCGATCAA   60

GGAGTTCTTC GGCACCAGCC AGCTGAGCCA ATTCATGGAC CAGAACAACC CGCTGTCGGG   120

GTTGACCCAC AAGCGCCGAC TGTCGGCGCT GGGGCCCGGC GGTCTGTCAC GTGAGCGTGC   180

CGGGCTGGAG GTC   193

(2) INFORMATION FOR SEQ ID NO:70:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 26 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

CGTGGAGGCG ATCACACCGC AGACGT   26

(2) INFORMATION FOR SEQ ID NO:71:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 25 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

GACCTCCAGC CCGGCACGCT CACGT   25

(2) INFORMATION FOR SEQ ID NO:72:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 128 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTGTC   120

ACGTGAGC   128

(2) INFORMATION FOR SEQ ID NO:73:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

CGCCGCGATC AAGGAGTTCT   20

(2) INFORMATION FOR SEQ ID NO:74:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 20 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

GCTCACGTGA CAGACCGCCG   20

(2) INFORMATION FOR SEQ ID NO:75:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

TGACAGACCG CCGGGCCC   18

(2) INFORMATION FOR SEQ ID NO:76:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 121 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTGTC   120

A   121

(2) INFORMATION FOR SEQ ID NO:77:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 18 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

AGACAGACCG CCGGGCCC   18

    (2) INFORMATION FOR SEQ ID NO:78:

         (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 121 base pairs
5   (B) TYPE: nucleic acid
              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
10   (A) DESCRIPTION: /desc = "DNA"

         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

15 CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

    CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTGTC   120

    T   121

20 (2) INFORMATION FOR SEQ ID NO:79:

         (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 18 base pairs
              (B) TYPE: nucleic acid
25   (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
30   (A) DESCRIPTION: /desc = "DNA"

         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:79:

    ACAGACCGCC GGGCCCCA   18

35 (2) INFORMATION FOR SEQ ID NO:80:

         (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 119 base pairs
              (B) TYPE: nucleic acid
40   (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

         (ii) MOLECULE TYPE: other nucleic acid
              (A) DESCRIPTION: /desc = "DNA"
45
         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:80:

    CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

50 CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTGT   119

    (2) INFORMATION FOR SEQ ID NO:81:

         (i) SEQUENCE CHARACTERISTICS:
55   (A) LENGTH: 18 base pairs
              (B) TYPE: nucleic acid
              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

60   (ii) MOLECULE TYPE: other nucleic acid
              (A) DESCRIPTION: /desc = "DNA"

         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:81:

65 CCAGACCGCC GGGCCCCA   18

(2) INFORMATION FOR SEQ ID NO:82:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 119 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: single
          (D) TOPOLOGY: linear

      (ii) MOLECULE TYPE: other nucleic acid
          (A) DESCRIPTION: /desc = "DNA"

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:82:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTGG   119

(2) INFORMATION FOR SEQ ID NO:83:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 18 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: single
          (D) TOPOLOGY: linear

      (ii) MOLECULE TYPE: other nucleic acid
          (A) DESCRIPTION: /desc = "DNA"

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:83:

CAGACCGCCG GGCCCCAG   18

(2) INFORMATION FOR SEQ ID NO:84:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 118 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: single
          (D) TOPOLOGY: linear

      (ii) MOLECULE TYPE: other nucleic acid
          (A) DESCRIPTION: /desc = "DNA"

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:84:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTG   118

(2) INFORMATION FOR SEQ ID NO:85:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 18 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: single
          (D) TOPOLOGY: linear

      (ii) MOLECULE TYPE: other nucleic acid
          (A) DESCRIPTION: /desc = "DNA"

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:85:

GAGACCGCCG GGCCCCAG   18

(2) INFORMATION FOR SEQ ID NO:86:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 118 base pairs
              (B) TYPE: nucleic acid
              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
              (A) DESCRIPTION: /desc = "DNA"

          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:86:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGGTCTC   118

(2) INFORMATION FOR SEQ ID NO:87:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 20 base pairs
              (B) TYPE: nucleic acid
              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
              (A) DESCRIPTION: /desc = "DNA"

          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:87:

CCGCCGGGCC CCAGCGCCGA   20

(2) INFORMATION FOR SEQ ID NO:88:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 114 base pairs
              (B) TYPE: nucleic acid
              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
              (A) DESCRIPTION: /desc = "DNA"

          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:88:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGG   114

(2) INFORMATION FOR SEQ ID NO:89:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 20 base pairs
              (B) TYPE: nucleic acid
              (C) STRANDEDNESS: single
              (D) TOPOLOGY: linear

          (ii) MOLECULE TYPE: other nucleic acid
              (A) DESCRIPTION: /desc = "DNA"

          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:89:

GCGCCGGGCC CCAGCGCCGA   20

(2) INFORMATION FOR SEQ ID NO:90:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 114 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:90:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCGC   114

(2) INFORMATION FOR SEQ ID NO:91:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:91:

CGGCCGGGCC CCAGCGCCGA   20

(2) INFORMATION FOR SEQ ID NO:92:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 114 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:92:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG GCCG   114

(2) INFORMATION FOR SEQ ID NO:93:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:

CGGGCCCCAG CGCCGACA   18

(2) INFORMATION FOR SEQ ID NO:94:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 110 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:94:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCG   110

(2) INFORMATION FOR SEQ ID NO:95:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:95:

AGGGCCCCAG CGCCGACA   18

(2) INFORMATION FOR SEQ ID NO:96:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 110 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:96:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGGCCCT   110

(2) INFORMATION FOR SEQ ID NO:97:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:97:

CCCCAGCGCC GACAGTCG   18

(2) INFORMATION FOR SEQ ID NO:98:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 106 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:98:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGG   106

(2) INFORMATION FOR SEQ ID NO:99:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:99:

TCCCAGCGCC GACAGTCG   18

(2) INFORMATION FOR SEQ ID NO:100:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 106 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:100:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCGCCG ACTGTCGGCG CTGGGA   106

(2) INFORMATION FOR SEQ ID NO:101:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:101:

CGCTTGTGGG TCAACCCCGA   20

(2) INFORMATION FOR SEQ ID NO:102:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 87 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:102:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCG   87

(2) INFORMATION FOR SEQ ID NO:103:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 20 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:103:

AGCTTGTGGG TCAACCCCGA   20

(2) INFORMATION FOR SEQ ID NO:104:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 87 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:104:

CGCCGCGATC AAGGAGTTCT TCGGCACCAG CCAGCTGAGC CAATTCATGG ACCAGAACAA   60

CCCGCTGTCG GGGTTGACCC ACAAGCT   87

(2) INFORMATION FOR SEQ ID NO:105:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 16 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: single
       (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
       (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:105:

GTGACAGAGT TGTTCT   16

(2) INFORMATION FOR SEQ ID NO:106:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:106:

GTGACAGATT GTTGTTCT   18

(2) INFORMATION FOR SEQ ID NO:107:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:107:

GTGACAGAGC GTTGTTCT   18

(2) INFORMATION FOR SEQ ID NO:108:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:108:

GTGACAGAAA GTTGTTCT   18

(2) INFORMATION FOR SEQ ID NO:109:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (ix) FEATURE:
        (A) NAME/KEY: misc_difference
        (B) LOCATION: replace(9..10, "")
        (D) OTHER INFORMATION: /note= "The residues at these
positions are spacers with abasic sugar labels."

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:109:

GTGACAGANN GTTGTTCT   18

(2) INFORMATION FOR SEQ ID NO:110:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:110:

TCACGTGAGC GTCCATGA   18

(2) INFORMATION FOR SEQ ID NO:111:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:111:

CAGACCGCGC ACAGCGGG   18

(2) INFORMATION FOR SEQ ID NO:112:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 17 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:112:

GCTCACGATA CCCCGAC   17

(2) INFORMATION FOR SEQ ID NO:113:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:113:

TGCTCACGAT ACCCCGAC   18

(2) INFORMATION FOR SEQ ID NO:114:

      (i) SEQUENCE CHARACTERISTICS:
           (A) LENGTH: 18 base pairs
           (B) TYPE: nucleic acid
           (C) STRANDEDNESS: single
           (D) TOPOLOGY: linear

     (ii) MOLECULE TYPE: other nucleic acid
           (A) DESCRIPTION: /desc = "DNA"

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:114:

CGCCGGGCGC TCAACCCC   18

(2) INFORMATION FOR SEQ ID NO:115:

      (i) SEQUENCE CHARACTERISTICS:
           (A) LENGTH: 18 base pairs
           (B) TYPE: nucleic acid
           (C) STRANDEDNESS: single
           (D) TOPOLOGY: linear

     (ii) MOLECULE TYPE: other nucleic acid
           (A) DESCRIPTION: /desc = "DNA"

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:115:

ACAGTCGGGC GGTTGTTC   18

(2) INFORMATION FOR SEQ ID NO:116:

      (i) SEQUENCE CHARACTERISTICS:
           (A) LENGTH: 18 base pairs
           (B) TYPE: nucleic acid
           (C) STRANDEDNESS: single
           (D) TOPOLOGY: linear

     (ii) MOLECULE TYPE: other nucleic acid
           (A) DESCRIPTION: /desc = "DNA"

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:116:

CGGGCCCCTA TGTGGGTC   18

(2) INFORMATION FOR SEQ ID NO:117:

      (i) SEQUENCE CHARACTERISTICS:
           (A) LENGTH: 18 base pairs
           (B) TYPE: nucleic acid
           (C) STRANDEDNESS: single
           (D) TOPOLOGY: linear

     (ii) MOLECULE TYPE: other nucleic acid
           (A) DESCRIPTION: /desc = "DNA"

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:117:

CTCACGTGTA TCTGGTCC   18

(2) INFORMATION FOR SEQ ID NO:118:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:118:

TGACAGACGT TGTTCT   16

(2) INFORMATION FOR SEQ ID NO:119:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:119:

CCCCAGCGGC GTTGTTCT   18

(2) INFORMATION FOR SEQ ID NO:120:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:120:

GTGTCGTTTG GAACCG   16

(2) INFORMATION FOR SEQ ID NO:121:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:121:

TGGGCGTTGC TTGTGG   16

(2) INFORMATION FOR SEQ ID NO:122:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 18 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:122:

TTGGGCGTTG CTTGTGGT   18

(2) INFORMATION FOR SEQ ID NO:123:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 13 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: other nucleic acid
        (A) DESCRIPTION: /desc = "DNA"

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:123:

TCCTTGATCG CGG   13